

**PAD MOUNT CONTROL SITE COMPLETE**  
**480 VOLT**  
**DOE PART # 6031030**  
**MFG. CENTRAL SYSTEMS & CONTROLS CORP. #20026031030**  
**MFG. DEWSBURY INC. #60310302002**

I. Quantity

The base bid shall include the indicated number of 480 volt pad mount control sites as hereinafter specified, located as shown on the drawings and determined in the field by the engineer.

II. Material

A) Enclosure DWG # 01S0126

The single door pad mount enclosure shall be 28" high, 18" wide, and 8 ¾" deep. The cabinet and door shall be made from .125" Stainless steel, with a 14 Ga. Stainless steel continuous weld hinge. The enclosure shall have a natural finish. A closed cell neoprene gasket shall be around the entire door for water integrity. The flange mounting disconnect operator shall be stainless steel or chrome plated for NEMA 4X application, capable of being locked in either position with a dual cover interlock mechanism. The cabinet & door shall have a grounding lug. The enclosure shall meet or exceed the requirements of a NEMA 4X rating and shall be U.L. listed. The cabinet shall have a 5" x 12" opening centered in the bottom with four ¾" mounting holes to accept 5/8" threaded studs from controller base. (DOE #6031000)

B) Padmount Controller Base (See Drawing # 01S0126)

The enclosure base shall be 18" high, 18" wide, 8 3/4" deep at the top and 15" deep at the bottom,. The base shall have a 5" X 12" opening centered in the top & a 8" X 12" opening centered in the bottom. The base shall be made from .125" Stainless Steel. The base shall meet or exceed the requirements of NEMA 4X rating and shall be U.L. listed and attached to enclosure with threaded 5/8" stainless steel studs welded in place & match enclosure bolt pattern.

The enclosure and base shall be natural finish. The enclosure shall be a Central Systems Controls Corp. (MFG# 20026031000), Dewsbury Inc. (MFG# 60310002002) or approved interchangeable equal. (DOE PART# 60-31000)

C) Control Panel (DWG#01S0067)

- 1) 100 ampere , 3 pole, 600 volt, (Cutler Hammer) single throw disconnect switch with 100 amp time delay, fuses, cooper shorting buss with lug for #2 cooper 7 strand

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- 2) NEMA rated 100 ampere, 3 pole, 600 volt, contactor with 120 volt operating coil, control transformer, type SBE, 480/120 volts, 60 cycle, .2 KVA and 2 amp control fuse holder shall be on secondary side and 1amp on primary side.

- 3) All fuses to be type H. (Blade Fuses)
- 4) Internal mounted Hand, Off, Auto selector switch.
- 5) Insulated solid cooper neutral bus capable of terminating the specified number and size wires
- 6) Terminal block shall be provided for photoelectric relay connection. Block shall accept # 10 copper wire and shall be Bussman 14002-3 or approved equal.
- 7) Control wiring – The conductors between the fuse disconnect and the conductor shall be 7 strand copper # 4 , 600 volt type THW. All other conductors shall be 7 strand copper #12, 600v type MTW.
- 8) The controller shall be wired as shown on drawing O1S0067.
- 9) The controller shall be assembled with standard hardware for ease of maintenance.
- 10) The control panel shall be Central Systems Corp (MFG # 20026031042), Dewsbury Inc. # 60310422002 or approved interchangeable equal.
- 11) The Lightning Arrestor shall be included on the control panel.
- 12) The mounting panel size shall be 25" x 15". DOE # 60-31042
- 13) The controller shall be fused according to the load amperage on the table below. Fuse reducers shall be Bussmann or approved equal

Load Amperage	Fuse Size	Fuse Reducer
1 - 12	15 A	Buss #216
13 – 25	30 A	Buss #216
26 – 37	45 A	Buss #616
38 – 50	60 A	Buss #616
51 - 66	80 A	N/A
67 – 83	100 A	N/A

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#### D) Precast Mounting Pad (DWG#01S0106)

The precast reinforced concrete mounting pad shall be 28" x 27" x 6" with an 8" x 12" opening in the center for the conduit. Threaded inserts for 3/4" bolts shall be cast into the pad to fit the bolt pattern of the cabinet. The mounting pad shall be precast with the dimensions shown on drawing 01S0106. The precast pad shall be cast by Norwalk Concrete Industries or other approved manufacturer.

E) Grounding

The ground rod shall be ½" x 10' copperweld.

The ground wire shall be #4 AWG bare solid copper.

F) Conduit

All conduit shall be 2" non-metallic schedule 40 pvc installed as specified in MIS-15.

G) Photo Electric Relay

The photo electric relay shall be cadmium sulphide with a locking type receptacle. The relay shall be pole mounted and operate at 120 volts. The turn on and off levels shall be adjustable for 0.3 to 6.0 foot candles. The photo electric relay shall be an approved equal to General Electric Company's C402G600 with adapter C403G001.

The control wire shall be Type USE, RHH, or RHW #12 seven strand copper.

H) Concrete Mix Quick crete or approved equal.

III. Installation

The control site shall be located within the utility easement close to the service transformer or pedestal and as directed by the engineer. Dwg # 01S0108

The precast pad shall be placed on compacted soil directly over the conduit within 5' of the transformer or pedestal. The pad must be level. Sand may be used, if necessary, to level the pad.

The ground rod shall be driven through the window of the pad. The #4 ground wire shall be attached to the neutral bar and jumped wire to grounding lug of enclosure and attached to ground rod.

Before the enclosure and base are set, the window in the pad shall be filled with a concrete mix. The concrete shall be ruff finished to assure a seal around the conduit and the ground rod.

The enclosure and extension base shall be attached to the pad with stainless steel bolts and washers.

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A) Power service

The contractor shall install three #4 5KV cables (MIS-14) from the line terminals of the control panel to power company's service transformer or pedestal leaving 4'+ of cable coiled for connection by the power company. The neutral cable shall be clearly marked. With white stripe and tape.

B) Photo Electric Control

The photo electric control shall be mounted on top of the first light standard of the circuit. The three control wires shall be installed in the same 2" conduit as circuit.

IV. Quotation

The complete pad mount control site shall be quoted as a unit price each in the appropriate

place of this document.

120V Photocell  
AIM WINDOW  
TO NORTH

240 / 480 VOLT  
TRANSFORMER  
480V - PHASE TO GROUND

MAIN  
DISCONNECT

FUSE  
1 KTK

CONNECT  
ABOVE FUSE

EO2 STEP DOWN  
TRANSFORMER

H1 H2 H3 H4

X1 X2

480V

120V

FUSE  
2 KTK

BLACK  
RED  
WHITE

PHOTOCELL  
TERMINAL  
BLOCK

HAND AUTO  
OFF

FUSE  
FUSE  
FUSE

FUSED  
FOR  
LOAD

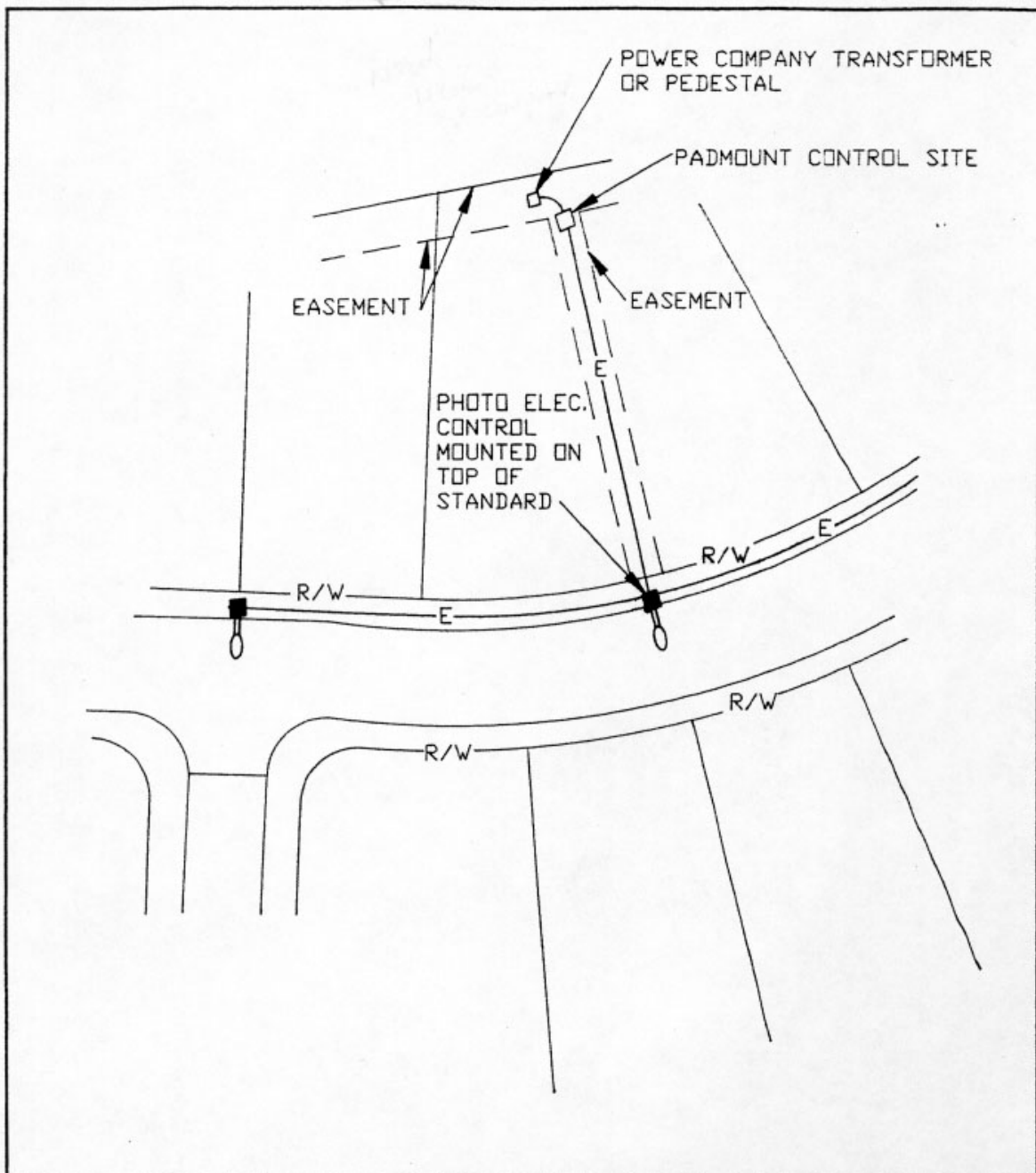
120 VOLT  
COIL

X1 X2

A RED  
B BLACK  
C BLUE

GROUND BAR

			MUNICIPAL ELECTRIC LIGHT & POWER SYSTEM CITY OF COLUMBUS, OHIO
			DEPT. OF UTILITIES - DIVISION OF ELECTRICITY
			STREETLIGHT CONTROLLER
			WIRING DIAGRAM FOR GROUNDED 480V FEED
			APPROVED BY:
			C.O. NO.
DATE	INITIALS	DESCRIPTION	
		REVISIONS	
			DATE: 11/22/04
			DRAWN BY: BEACHLER
			DWG. NO. 01S0067



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MUNICIPAL ELECTRIC LIGHT & POWER SYSTEM  
CITY OF COLUMBUS, OHIO  
DEPT. OF UTILITIES & AVIATION - DIV. OF ELECTRICITY

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## TYPICAL CONTROL SITE PLAN

SCALE NONE

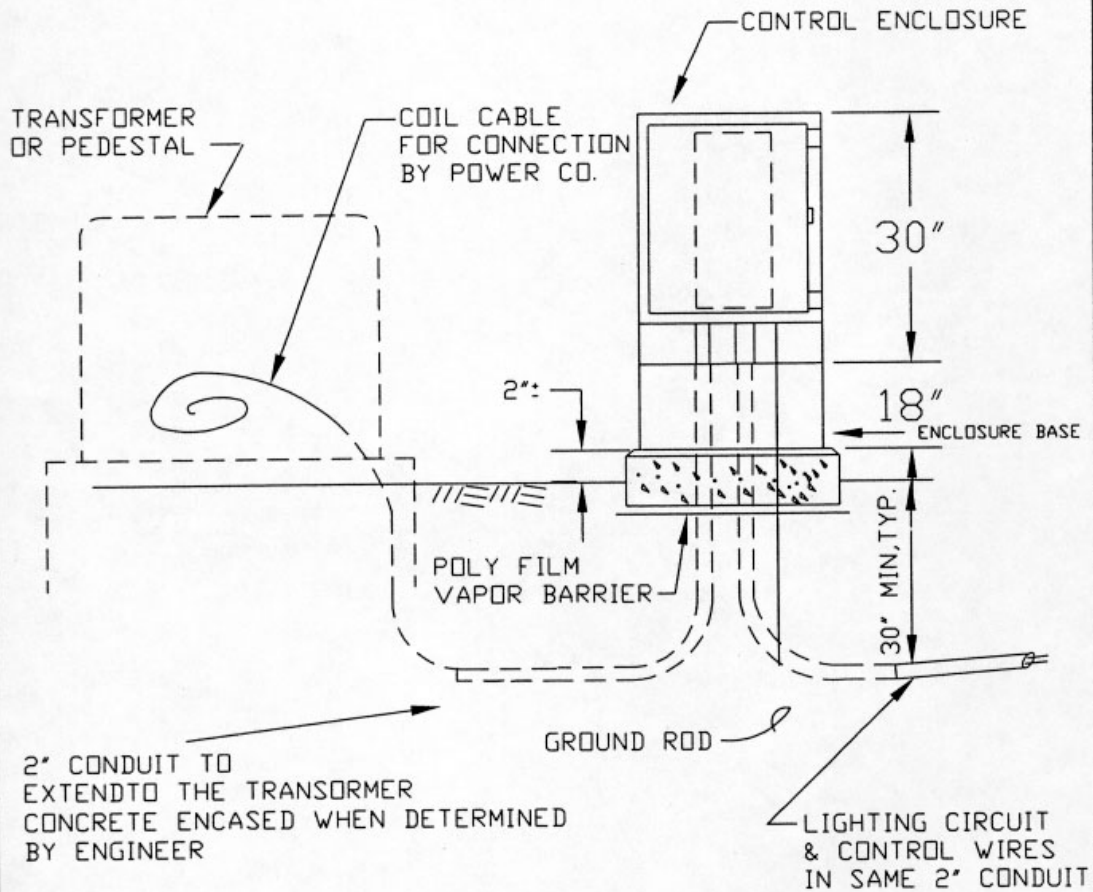
DRAWN BA 5/91

DRAWING NO.  
01S0108

C. D. NUMBER

APPROVED

SHEET 1 OF 2



9/19/91  
9/15/92  
10/4/01  
04/27/04

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MUNICIPAL ELECTRIC LIGHT & POWER SYSTEM  
CITY OF COLUMBUS, OHIO  
DEPT. OF UTILITIES - DIVISION OF ELECTRICITY

# PADMOUNT CONTROL SITE

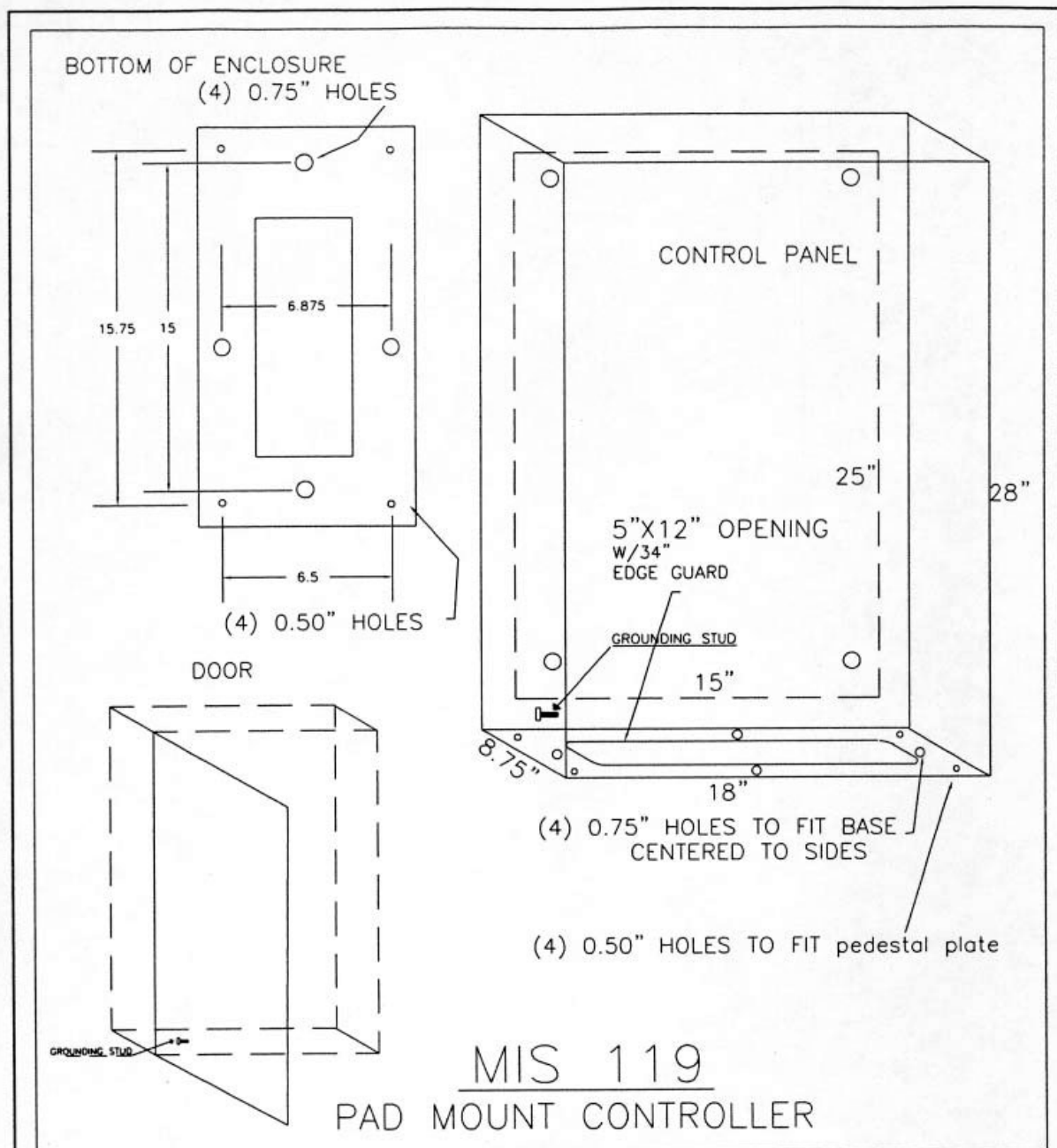
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DRAWN BA 5/91

DRAWING NO.  
01S0108  
SHEET 2 OF 2

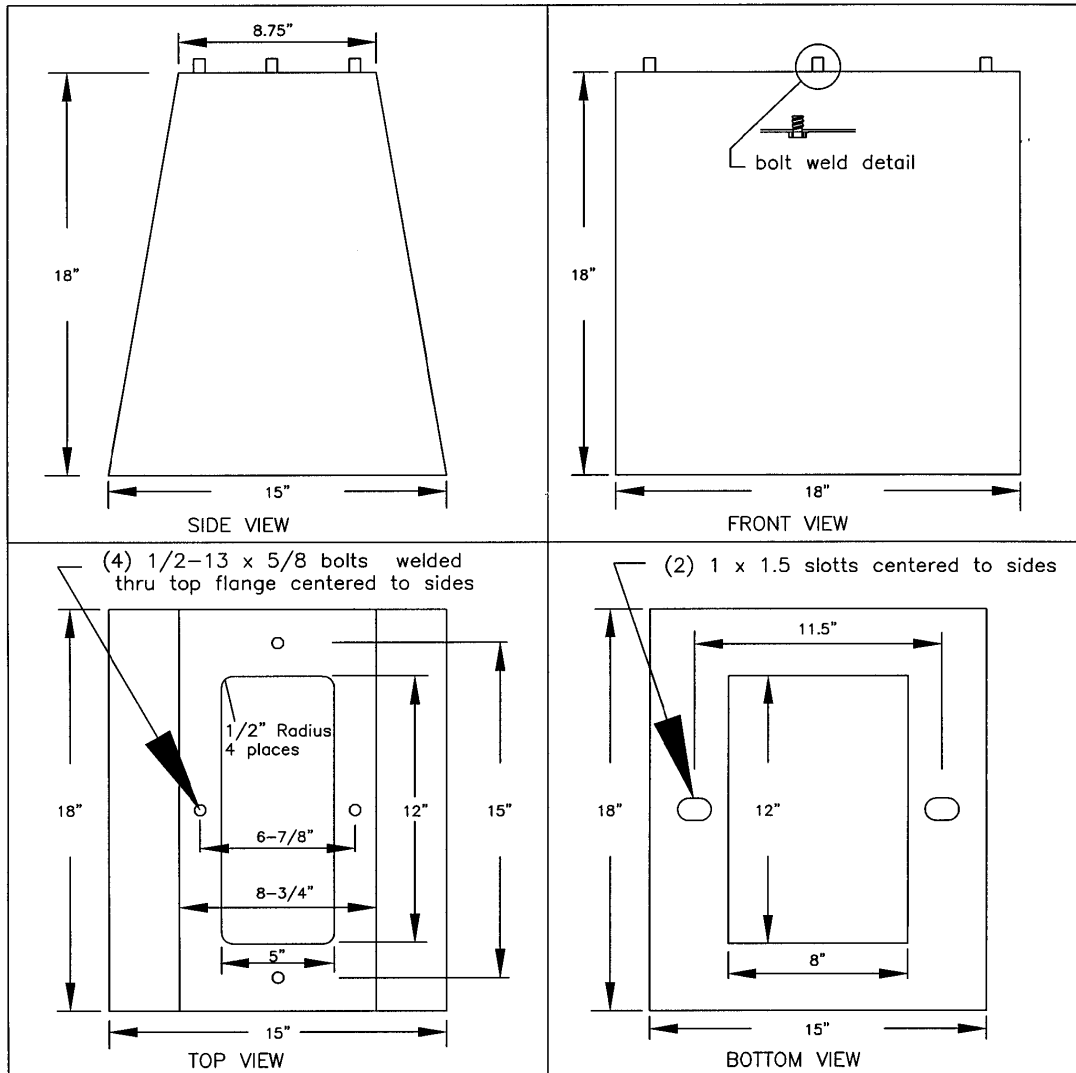
C. O. NUMBER

APPROVED



REVISIONS STUD ADDED 3/25/04 CLV EDGE GUARD ADDED 4/15/04 CLV	MELP MUNICIPAL ELECTRIC LIGHT & POWER SYSTEM CITY OF COLUMBUS, OHIO DEPT. OF UTILITIES - DIVISION OF ELECTRICITY		
	ENCLOSURE FOR PAD MOUNT CONTROLLER		
	SCALE NONE	DRAWN CLV	DRAWING NO. 01S0126
	C. O. NUMBER	APPROVED	SHEET 1 OF 3





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<p><b>PAD MOUNT CONTROLLER BASE</b></p>		
<p>REVISIONS</p>	<p>SCALE NONE</p>	<p>DRAWN CLV</p>
	<p>C. O. NUMBER</p>	<p>APPROVED</p>
<p>DRAWING NO. 01S0126 SHEET 2 OF 2</p>		

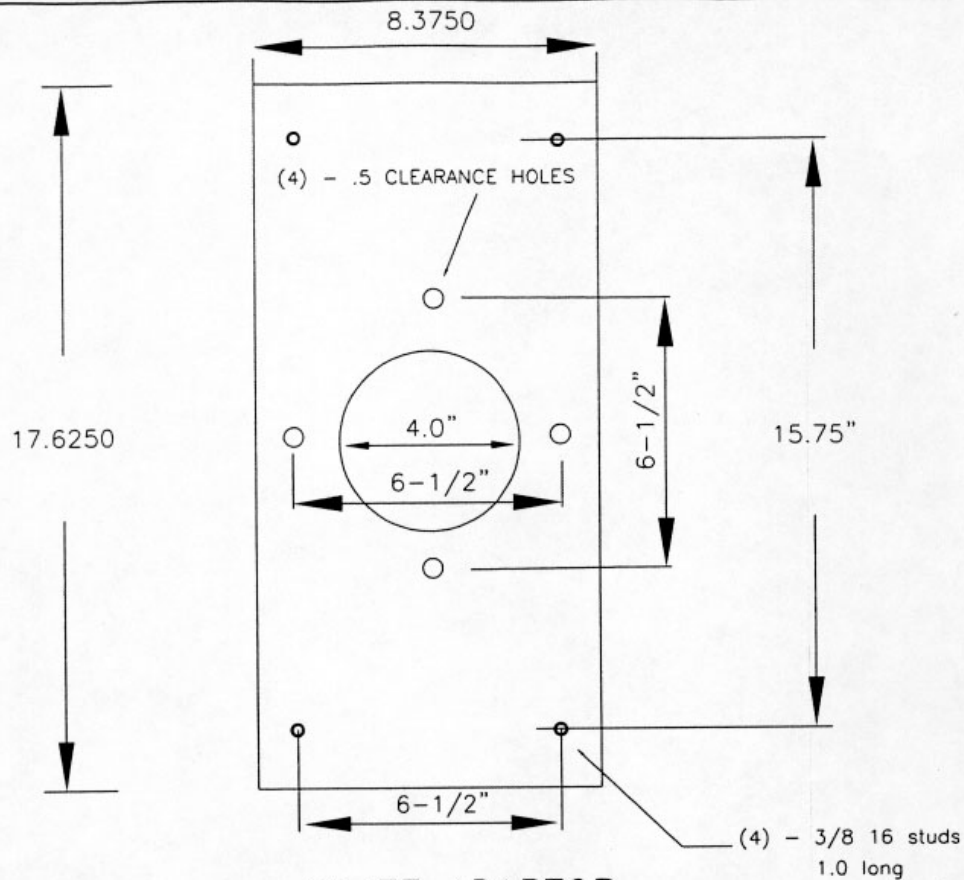
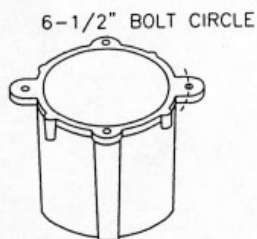
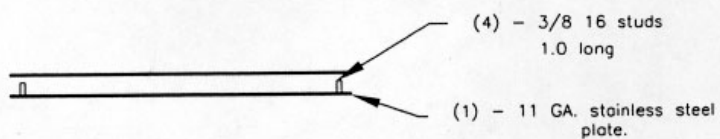


PLATE ADAPTOR



SLIP-FILTER 4"  
PEDESTAL ADAPTER



STAINLESS STEEL HARDWARE SHALL BE SUPPLIED FOR FASTENING OF ENCLOSURE.

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PAD/PEDESTAL MOUNT  
CONTROLLER ADAPTOR PLATE

SCALE NONE

DRAWN CLV

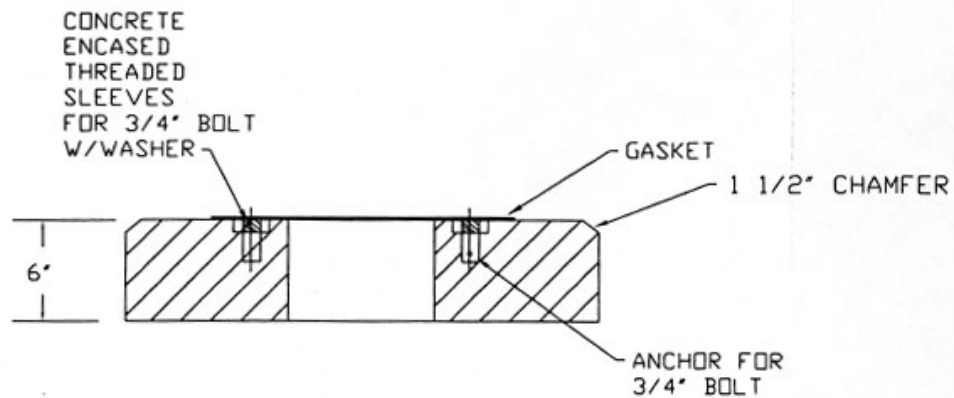
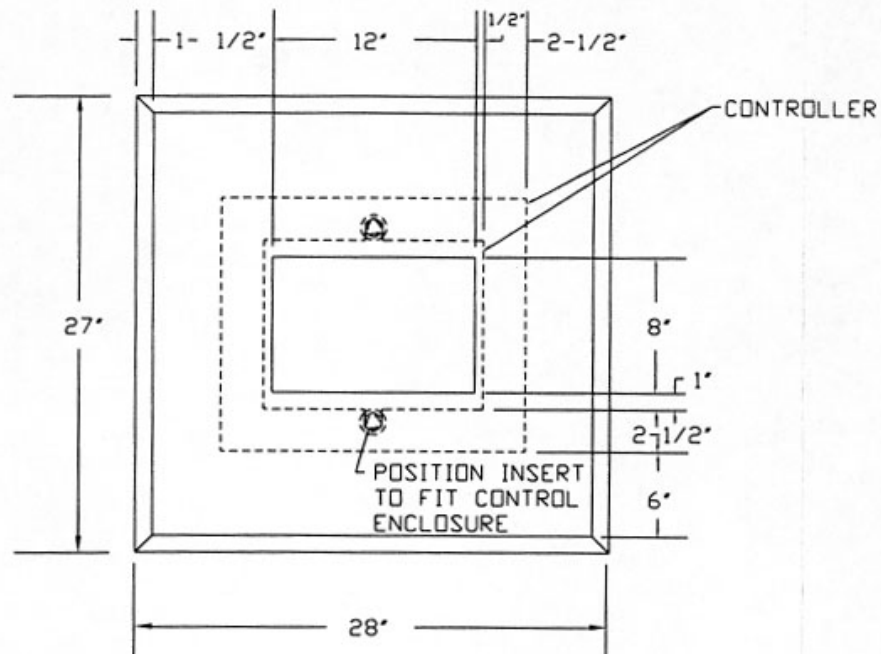
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01S0126

C. O. NUMBER

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SHEET 3 OF 3



8/30/92

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# STREET LIGHTING CONTROLLER PRECAST MOUNTING PAD

SCALE 1"=10'-0"

DRAWN PC 6/91

DRAWING NO.  
01S0106  
SHEET 1 OF 1

C. D. NUMBER

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